Portulaca pilosa Linn. Sp. Pl. 639, 1753.

Specimens examined: Hissar, *N. C. Nair* 24891 (October 1962). Jhabua, *N. C. Nair* 20711 (March 1962). Khanak, *N. C. Nair* 25101 (October, 1962). Sirsa, *N. C. Nair* 18909 (December 1961).

On dry hill slopes and on hard grounds. Rare.

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STUDIES IN CYPERACEAE: II. *CYPERUS MELANOSPERMUS* SSP. *BIFOLIUS* (MIQ.) KERN—A NEW RECORD FOR SOUTH INDIA

During a recent collection tour to Muthukuzhi forest in Kanyakumari District, Madras State, an interesting specimen of *Cyperus* (section *Kyllinga*) was collected which was identified by J. H. Kern as *Cyperus melanospermus* ssp. *bifolius* (Miq.) Kern, a taxon which has not been recorded so far in Indian Floras.

Miquel (1856) designated this subspecies *Kyllinga bifolia* which, at a later date, was merged by Kükenthal with *Cyperus melanospermus* (Nees) Valck. Sur. But prior to Kükenthal, Valckenier Suringar (1898) had treated it as but a form of *Cyperus brevifolius* (Rottb.) Hassk. From this brief account of the nomenclatural history of this subspecies presented by Kern (1954), it is obvious that it seems to be an intermediate taxon which could be easily referable either to *C. brevifolius* or to *C. melanospermus*. In view of the intermediate characters prevalent in both these taxa and according to Kern (personal communication), it may even be doubted whether this subspecies could be of a hybrid origin (*C. brevifolius* × *C. melanospermus*).

The type of this taxon was collected in Java by Junghuhn (439), where it seems to be fairly well represented; it has been recorded also from Lesser Sunda Islands and New Guinea. As far as South India is concerned, this subspecies has been collected from higher altitudes (1000-2300 m).

As this subspecies is now considered a new record for South India it is but necessary to give a description and compare it with *C. melanospermus* and *C. brevifolius*.

Description: Rhizomatous herb, rhizome thick, woody with short internodes; internodes with brownish, ovate-lanceolate, many-nerved, purplish sheath; culm 25-75 cm long, 2-2.5 mm broad; leaf 15-30 cm long, 5-6 mm broad, margins sparsely scabrid; spikes 9-10 mm long, 7-8 mm broad, ovate-cylindric, with densely arranged spikelets; spikelets brown, ovate-elliptic, 4.5-5 mm long, 1.25-1.5 mm broad; prophyll broadly ovate-elliptic, 1.75-2 mm long, 1 mm broad; glumes 3, the first glume oblong-obovate, 1.25-1.5 mm long, 1 mm broad, without a keel; second and third glumes elliptic-ovate with conspicuous serrulate spinulose keels, the former 3-3.5 mm long, 1 mm broad, the latter 4-4.5 mm long, 1-1.25 mm broad; achenes broadly elliptic-obovate, 1.5-1.75 mm long, 0.75 mm broad, yellowish brown, minutely transversely punctate.

Comparing with *C. brevifolius* and *C. melanospermus*, all the three taxa may be distinguished by the following characters:

Culms up to 175 cm tall, 4 mm thick, leaves reduced to membranous purplish red sheaths; spikelets oblong-elliptic, 1 mm broad; glumes ovate-lanceolate; achene oblong or elliptic-oblong, black ... ... *C. melanospermus*

Culms up to 75 cm tall, 2.5 mm thick; leaves fairly well-developed; spikelets ovate-elliptic, up to 1.5 mm broad; glumes elliptic-ovate; achenes broadly elliptic-obovate, yellowish brown ... ... *C. melanospermus* ssp. *bifolius*

Culms up to 60 cm tall, glumes ovate with setulose-scabrid lower half, the upper half smooth or sparsely so, achenes narrowly elliptic or elongate, yellowish brown...*C. brevifolius*

South India: Pykara, Nilgiris Dt., *Fyson* 2922 (HCPM). Path to Kukal, Kodaikanal Dt., *Fyson* 4364 (HCPM). Pollibetta, Coorg, *Indira* 17 (HCPM). Bolampatti R. F., Coimbatore Dt., *Sreemadhavan* 7009 (HCPM). Kodaiyar, Kanyakumari Dt., *Govindarajalu* 7628 (HCPM). Panthadikalam, Kanyakumari Dt., *Govindarajalu* 7646 (HCPM).

HCPM—Herbarium Collegii Presidentiae Madrasensis.

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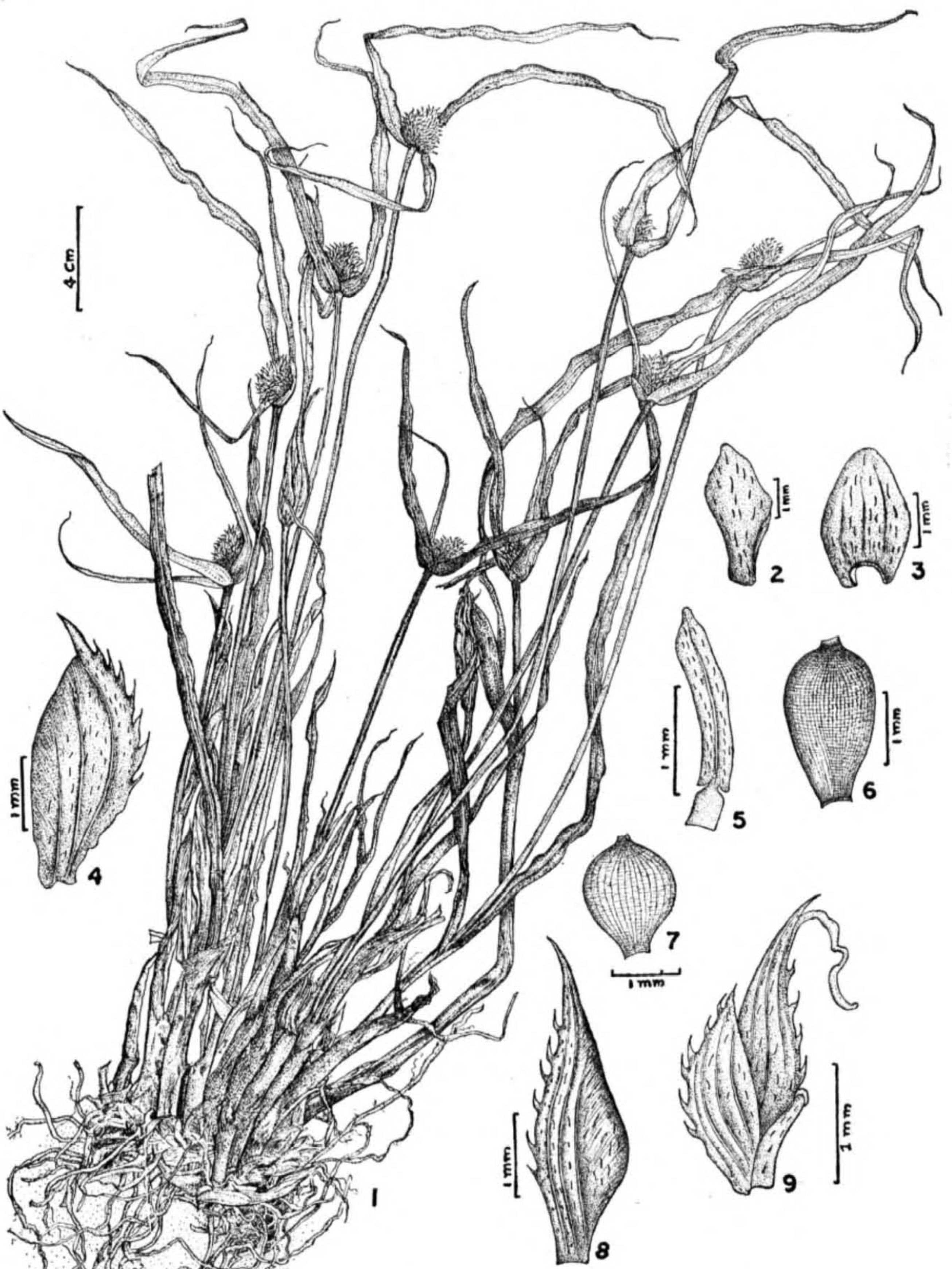
LITERATURE CITED

Kern, J. H. *Reinwardtia* 3 : 27, 1954.



Cyperus melanospermus ssp. *bifolius* (Miq.)[Kern

Figs. 1-9: 1. Entire plant. 2. First glume. 3. Prophyll. 4. Second glume. 5. Anther. 6. & 7. Achene. 8. Third glume. 9. Spikelet ... After *Govindarajalu* 7628.